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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,879	05/30/2002	Jorunn Nilsen	09100.024	6277
23117	7590	05/24/2007		
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER WOLLSCHLAGER, JEFFREY MICHAEL	
			ART UNIT 1732	PAPER NUMBER
			MAIL DATE 05/24/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/049,879	NILSEN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jeff Wollschlager	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 11-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's amendment to the claims filed on February 28, 2007 has been entered. Claims 1-10 have been canceled. Claims 11-13 are new.

### ***Specification***

The abstract of the disclosure is objected to because the recitation "in the production by blow moulding of" is awkward in its presentation. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite "ethylene homopolymer having an Mw of 40,000 to 100,000". It is unclear whether the claims intend to limit the homopolymer to a weight average molecular weight of 40,000 to 100,000 Daltons (emphasis added) or whether the intended limitation is something else. For the purposes of examination the limitation is understood to be directed to a weight average molecular weight of 40,000 to 100,000 Daltons.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morimoto et al. (US 5,189,106) in view of any of Debras (US 6,221,982) or Barry (US 6,403,181) or Harlin (US 6,090,893) and either of McWhorter (US 4,391,128) or Suttoni (US 6,126,033) as evidenced by Page (US 4,617,352) and O'Brien (US 6,709,718) and Jacob (US 7,193,018).

Regarding claims 11-13, Morimoto et al. teach a polyethylene composition for blow molding (col. 26, lines 57-67) applications, with an F<sub>50</sub> ESCR of >1000 hours (Table 16), wherein the polyethylene composition comprises 20 to 80 wt% of an ethylene copolymer (col. 2, lines 50-57) and 80 to 20 wt% of an ethylene homopolymer

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(col. 3, lines 7-12). The intrinsic viscosity/molecular weight of the copolymer is higher than the intrinsic viscosity/molecular weight of the homopolymer (Abstract). Morimoto et al. disclose the intrinsic viscosity of the homopolymer ranges from 0.2 to 1.6 dl/g (Abstract), the density of the final product ranges from 0.89 to 0.95 g/cm<sup>3</sup> (i.e. 890 to 950 kg/m<sup>3</sup>) (col. 5, lines 45-52), the intrinsic viscosity of the final product ranges from 0.77 to 5.2 dl/g and exemplify ratios of HLMFR/MFR between 105-204 (Table 5B) for the final product.

Regarding the ratio of HLMFR/MFR shown in Table 5B, the examiner notes for example, in Example 5, a HLMFR/MFR ratio of 204 is given. The MFR for this example was 0.022. Therefore the HLMFR for Example 5 is approximately 4.5 (204 x 0.022). Morimoto et al. do not disclose the claimed comonomer content nor the size of the blow molded article. Morimoto et al. also do not clarify the relationship between intrinsic viscosity and molecular weight.

However, each of Debras (col. 1, lines 29-52; col. 4, lines 7-64; Table 1), Harlin (col. 2, lines 22-35; col. 3, lines 48-57) and Barry (col. 1, lines 44-52; col. 4, lines 15-20) individually disclose analogous methods wherein the comonomer content is optimized to produce desired results such as improved crack resistance. Further, Debras discloses the conventional range of molecular weight distributions. Furthermore, each of Suttoni (col. 2, lines 6-60) and McWhorter (col. 1, lines 15-57; col. 2, lines 54-58) individually disclose blow molded polyethylene containers with a volume greater than 8L.

The evidence relating the intrinsic viscosity values disclosed by Morimoto et al. with molecular weight is provided by Page et al. (col. 5, lines 38-45), O'Brien (col. 5, lines 46-52) and Jacob (col. 14, lines 54-67). These references provide *prima facie* evidence supporting the conclusion that the polyethylenes disclosed by Morimoto et al., in terms of intrinsic viscosity, have molecular weights that overlap the instantly claimed molecular weights.

Therefore it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to have employed the blow molding suitable polyethylene disclosed by Morimoto et al. and to have optimized the comonomer content as suggested by each of Debras, Harlin and Barry for the purpose of improving properties, such as stress cracking (Harlin: col. 3, lines 48-57), and to have blow molded a container larger than 8L, as suggested by each of Suttoni and McWhorter, in order to produce a desired product.

Moreover, the examiner notes that the combination employs the same claimed materials with the same claimed process in the same claimed manner. It therefore follows that the produced product contains the same claimed physical properties (e.g. tensile modulus).

### ***Response to Arguments***

Applicant's arguments filed February 28, 2007 have been fully considered, but are moot in view of the new grounds of rejection necessitated by the amendment to the claims. Should applicant traverse the rejection set forth above, an amendment to the

claims as suggested in the previous office action would still appear to overcome the new grounds of rejection. Alternatively, applicant is encouraged to provide evidence showing the criticality of the claimed ranges and how the claims clearly distinguish over the prior art of record.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager  
Examiner  
Art Unit 1732

May 16, 2007

  
CHRISTINA JOHNSON  
SUPERVISORY PATENT EXAMINER  
5/21/07